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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/625,281	07/23/2003	Elke Schlosser	2002DE121	7904

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Clariant Corporation
Industrial Property Department
4000 Monroe Road
Charlotte, NC 28205

EXAMINER	
THEXTON, MATTHEW	

ART UNIT	PAPER NUMBER
1714	

DATE MAILED: 05/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/625,281	SCHLOSSER ET AL.	
	Examiner	Art Unit	
	Matthew A. Thexton	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-17 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-17 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date three sheets.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 2003 December 12 and 2004 May 17 are in compliance with the provisions of 37 CFR 1.97. Accordingly, these information disclosure statements are being considered by the examiner.

A duplicate citation of US 6547992 (found on both IDS's) has been lined through on the form PTO 1449 of 2004 May 17.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "with the melamine content" in the fourth from last line of page 2 of the Preliminary Amendment to the claims. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, this has been interpreted as - - with the triazines compound content. - -

Claims 15 and 17 recite various polymers and blends, and following "polycarbonates" at line 3 of each claim the list is confusing as it is not clear if "blends" modifies all of the list or just polycarbonates, and because in lines 3-4 it is unclear is "polymer blends of the type" refers to just three members immediately following or somehow includes "polyamide, polyester", and because in the final line of the claims is the conclusion "and blends of PPE/HIPS" which already appears in the penultimate line of the claims.

Claim 9 recites a "method for for..."

Claims Analysis

Claim 1 is directed to a flame retardant combination comprising (A) a phosphinate, and/or a diphosphinate, and/or polymers of these, as more specified by the moieties and the counterion being calcium, magnesium, aluminum, and/or zinc; and (B) at least one of three specified melamine or melamine derivative salt with polyphosphate. Claims 2-17, all the remaining claims, depend directly or indirectly from claim 1. Claims 2-8 and 12-14 further specify or narrow parts of the mixture.

Claim 9 is directed to methods comprising "adding" the mixture of claim 1 to a thermoplastic polymer. Claims 10, 15, and 16 depend from claim 9 and further specify the proportions or list a group of thermoplastic polymers.

Claims 11 is directed to a molding composition comprising the mixture of claim 1 and a thermoplastic polymer. Claim 17 depends from claim 11 and lists a group of thermoplastic polymers.

35 USC § 102 and § 103

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim Rejections

Claims 1-17 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Steenbakkers-Menting et al. (WO 02/28953-A1) taken with evidentiary reference Kersjes et al. (WO 00/02869-A1)..

The claims are discussed in the section ***Claims Analysis*** hereinabove and incorporated here by reference.

Reference '953 discloses flame retardant mixtures and their addition to thermoplastic polymer, exemplifying polyamide. Examples employ zinc and aluminum dimethylphosphinate plus Melapur ® 200 (melamine polyphosphate) plus polyamide 6, at proportions encompassed by the present claims. The reference suggests a melamine polyphosphate as described in WO 00/02869-A1 (page 2, lines 1-4). Reference '869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant's claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is disclosed as better thermal stability (page 2, lines 22-34).

The reference discloses it is preferable that the degree of condensation is higher than 20, giving the advantage that this reduces blooming (paragraph 21). The reference discloses it is preferable that the ratio of melamine to phosphorus is higher than 1.1 (paragraph 21). Since Melapur 200 is a product of the assignee of this reference, it may be reasonable to conclude that the disclosure of these preferable properties is the result of the inherent properties of this specifically exemplified product. It is concluded that the disclosure with respect to degree of condensation is sufficiently specific that the disclosure is fully anticipating of Applicant's claims.

Assuming arguendo that the reference is not anticipating of melamine polyphosphate component of Applicant's claims, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of the preferred specifications as plainly suggested by the disclosure of the reference. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference '869 in the mixtures of reference '953 in view of the plain suggestion to do so.

Claims 1-17 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Steenbakkers-Menting et al. (US 2004/0021125-A1) taken with evidentiary reference Kersjes et al. (WO 00/02869-A1).

This reference identical to Steenbakkers-Menting et al. (WO 02/28953-A1), but has a later date.

This rejection is identical as that over reference '953, with appropriate changes to pages, lines, and paragraphs.

The claims are discussed in the section ***Claims Analysis*** hereinabove and incorporated here by reference.

Reference '135 discloses flame retardant mixtures and their addition to thermoplastic polymer, exemplifying polyamide. Examples employ zinc and aluminum dimethylphosphinate plus Melapur ® 200 (melamine polyphosphate) plus polyamide 6, at proportions encompassed by the present claims. The reference suggests a melamine polyphosphate as described in WO 00/02869-A1 (page 2, lines 1-4).

Reference '869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant's claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is disclosed as better thermal stability (page 2, lines 22-34).

The reference discloses it is preferable that the degree of condensation is higher than 20, giving the advantage that this reduces blooming (paragraph 21). The reference discloses it is preferable that the ratio of melamine to phosphorus is higher than 1.1 (paragraph 21). Since Melapur 200 is a product of the assignee of this reference, it may be reasonable to conclude that the disclosure of these preferable properties is the result of the inherent properties of this specifically exemplified product. It is concluded that the disclosure with respect to degree of condensation is sufficiently specific that the disclosure is fully anticipating of Applicant's claims.

Assuming arguendo that the reference is not anticipating of melamine polyphosphate component of Applicant's claims, it would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of the preferred specifications as plainly suggested by the disclosure of the reference. It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference '869 in the mixtures of reference '115 in view of the plain suggestion to do so.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schlosser et al. (US 6255371-B1) in view of Kersjes et al. (WO 00/02869-A1).

The claims are discussed in the section ***Claims Analysis*** hereinabove and incorporated here by reference.

Reference '371 discloses flame retardant mixtures and their addition to thermoplastic polymer and blends, exemplifying polyamide, PPE/HIPS, PBT. Examples employ zinc and aluminum diethylphosphinate plus Melapur ® 200 (melamine polyphosphate) plus polyamide, PPE/HIPS, PBT, at proportions encompassed by the present claims. The reference fails to disclose the degree of condensation nor the ratio of melamine to phosphorus of the Melapur. The reference discloses it is preferable that the degree of condensation is higher than 10 (column 2, lines 61-62). The reference is silent with respect to the ratio of melamine to phosphorus and to the pH greater than or equal to 4.5 of a 10 weight % slurry.

Reference '869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant's claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is disclosed as better thermal stability (page 2, lines 22-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference '869 in the mixtures of reference '371 in order to obtain the better processing ability attributed to it by reference '869.

Claims 1-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jenewein et al. (CA 2250995-A1) in view of Kersjes et al. (WO 00/02869-A1).

The claims are discussed in the section ***Claims Analysis*** hereinabove and incorporated here by reference.

Reference 995 discloses flame retardant mixtures and their addition to thermoplastic polymer and blends, exemplifying polyamide, PET, PBT, ABS. Examples employ aluminum diethylphosphinate, methylethylphosphinate, and methylpropylphosphinate plus melamine phosphate plus polyamide, PET, PBT, ABS, at proportions encompassed by the present claims. The reference fails to disclose the melamine polyphosphate.

Reference 869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant s claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is disclosed as better thermal stability (page 2, lines 22-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference 869 in the mixtures of reference 995 in order to obtain the better processing ability attributed to it by reference 869.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 7-10 and 13-18 of copending Application No. 10890366 in view of Kersjes et al. (WO 00/02869-A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of 366 require an aromatic or semi aromatic copolyamide in combination with the flame retardant mixture as in the present claims, and such combination is contemplated by Applicant (Page 11 of specification) and encompassed by the noted claims. Reference 869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant s claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is

disclosed as better thermal stability (page 2, lines 22-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference 869 in the mixtures of reference 366 in order to obtain the better processing ability attributed to it by reference 869.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 1-17 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 15 of copending Application No. 10890068 in view of Kersjes et al. (WO 00/02869-A1). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claim of 068 requires an elastic such as nylon (claim 18) in combination with the flame retardant mixture of phosphinate salt and melamine polyphosphate, which is encompassed by the noted claims. Reference 869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant s claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is disclosed as better thermal stability (page 2, lines 22-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference 869 in the mixtures of reference 068 in order to obtain the better processing ability attributed to it by reference 869.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conflicting Inventions

Claims 1-17 are directed to an invention not patentably distinct from claims 7-10 and 13-18 of commonly assigned 10890366. Specifically, although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of 366 require an aromatic or semi aromatic copolyamide in combination with the flame retardant mixture as in the present claims, and such combination is contemplated by Applicant (Page 11 of specification) and encompassed by the noted claims. Reference 869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant s claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is disclosed as better thermal stability (page 2, lines 22-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference 869 in the mixtures of reference 366 in order to obtain the better processing ability attributed to it by reference 869.

Claims 1-17 are directed to an invention not patentably distinct from claim 15 of commonly assigned 10890068. Specifically, although the conflicting claims are not

identical, they are not patentably distinct from each other because the claim of 068 requires an elastic such as nylon (claim 18) in combination with the flame retardant mixture of phosphinate salt and melamine polyphosphate, which is encompassed by the noted claims. Reference 869 discloses flame retardants for use in polymers such as polyamides, polyesters, et al., and exemplifies polyamide 6.6. The flame retardant is as defined in Applicant s claim 1, with a degree of condensation higher than 20 and a ratio of melamine to phosphorus of at least 1.1 and a pH greater than or equal to 4.5 of a 10 weight % slurry (page 3, lines 1-17). The benefit of this is disclosed as better thermal stability (page 2, lines 22-34). It would have been obvious to one of ordinary skill in the art at the time of the invention to have employed a melamine polyphosphate of Reference 869 in the mixtures of reference 366 in order to obtain the better processing ability attributed to it by reference 869.

The U.S. Patent and Trademark Office normally will not institute an interference between applications or a patent and an application of common ownership (see MPEP 2302). Commonly assigned 10890366 and 10890068, discussed above, would form the basis for a rejection of the noted claims under 35 U.S.C. 103(a) if the commonly assigned case qualifies as prior art under 35 U.S.C. 102(e), (f) or (g) and the conflicting inventions were not commonly owned at the time the invention in this application was made. In order for the examiner to resolve this issue, the assignee can, under 35 U.S.C. 103(c) and 37 CFR 1.78(c), either show that the conflicting inventions were

commonly owned at the time the invention in this application was made, or name the prior inventor of the conflicting subject matter.

A showing that the inventions were commonly owned at the time the invention in this application was made will preclude a rejection under 35 U.S.C. 103(a) based upon the commonly assigned case as a reference under 35 U.S.C. 102(f) or (g), or 35 U.S.C. 102(e) for applications filed on or after November 29, 1999.

Citation of Pertinent Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Kleiner et a. (US 5780534-A) corresponds to EP 699708 and the abstract, both of which were cited by Applicant.

Suzuki et al. (WO 97/44377-A1), cited by Applicant, discloses the melamine polymetaphosphate which is identified as B2 in present claim 1, as a flame retardant for thermoplastic polymers.

Suzuki et al. (WO 98/39306-A1 and US 6136973-A) discloses the composite salt which is identified as B3 in present claim 1, as a flame retardant for thermoplastic polymers.

Kasowski, et al. (WO 98/45364-A1) discloses thermoplastic polymers employing melamine polyphosphate and optionally a charring catalyst or a charring catalyst with a char former. The reference is silent with respect to phosphinate salts. The reference suggests the degree of condensation is greater than 2.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew A. Thexton whose telephone number is 571-272-1125. The examiner can normally be reached on Monday-Friday, 9:30 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner s supervisor, Vasudevan S. Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M. A. Thexton

Matthew A. Thexton
Primary Examiner
Art Unit 1714